HIGHLIGHTS 2011

ANNUAL REVIEW
SEPTEMBER 2011

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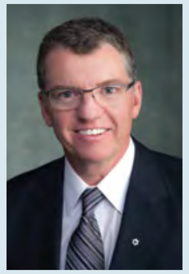
University
of Victoria

From the president



Welcome to *Highlights*, the University of Victoria's annual review for 2010-11.

Every year I'm proud to share stories of discovery, accomplishment and collaboration with our global community that exemplify the UVic vision—to contribute to the betterment of our society and our world through scholarship, teaching and research.

For each breakthrough chronicled this year, there are countless others across our campus—and more developing each day. These achievements are inextricably bound with the energy of discovery and commitment to excellence that live in the heart of our research-intensive university.

The work done by our students, faculty and staff is helping to shape our future. I hope you'll take a moment to review our year's highlights—in clean energy, oceans research, indigenous education and many other fields that have helped make UVic a world-leading institution.

David H. Turpin, CM, PhD, FRSC

CLEAN ENERGY

An IESVic researcher investigates gas-dispersion patterns to improve the safety of hydrogen fuel cells.

> *"IESVic fills a niche that brings industry and academia together to solve some of the world's more difficult problems."*
>
> —Nigel David, graduate

Largely due to the Institute for Integrated Energy Systems (IESVic), UVic is a world leader in the development of sustainable energy technologies with real-world, practical applications.

Energy is a crucial element of society—it is essential for communities to work, play and grow. But our reliance on fossil fuels has a limited future. With climate change, sustainability issues and unstable supplies of energy, Canada and the world need a road map to a different energy future.

Back in 1989—well before energy industry executives, governments and the public understood the severity of the climate change challenge—UVic founded the Institute for Integrated Energy Systems (IESVic) to develop and promote feasible energy solutions.

Since then, IESVic has become an internationally recognized leader in the development of sustainable energy technologies with real-world, practical applications. Working closely with private and public sector partners in Canada and around the world, IESVic researchers investigate entire sustainable energy systems—from the harnessing, storage, transmission and conversion of new energy sources to the delivery of services to communities and industries.

IESVic pioneered Canada's first major university-industry research partnership to study fuel cells and hydrogen systems. Engineers at IESVic used computer models to explore what a large-scale hydrogen economy would look like. And they redesigned fuel cells to be smaller and more efficient. The work resulted in the transfer of 18 patents to industrial partners and spawned a host of new business ventures. It also solidified IESVic's place at the forefront of energy systems research.

International scope

In May 2011, IESVic hosted the second annual Canada-China Clean Energy Workshop, where 55 leading energy system researchers from across Canada and China got to know each other and explore collaborative research opportunities.

The workshop included discussions about climate change and the need for science-based solutions, but also focused on new horizons in renewable energy, including fuel cells, smart grid technology and green vehicles.

While plans are already under way for next year's workshop—to be held in Beijing—this year's event is definitely being seen as a success. "Many new relationships were formed between Chinese and Canadian researchers, and plans for a number of exciting collaborative projects were generated," explains IESVic Director Peter Wild.

Real-world solutions

Many of the projects that will shape our energy future are already underway. Today, IESVic investigates areas as diverse as fuel cell science, cryofuels, hydrogen technology, energy systems analysis and energy policy development, as well as alternative energy sources such as wind, solar, run-of-river hydro, tidal and wave power.

A big-picture approach

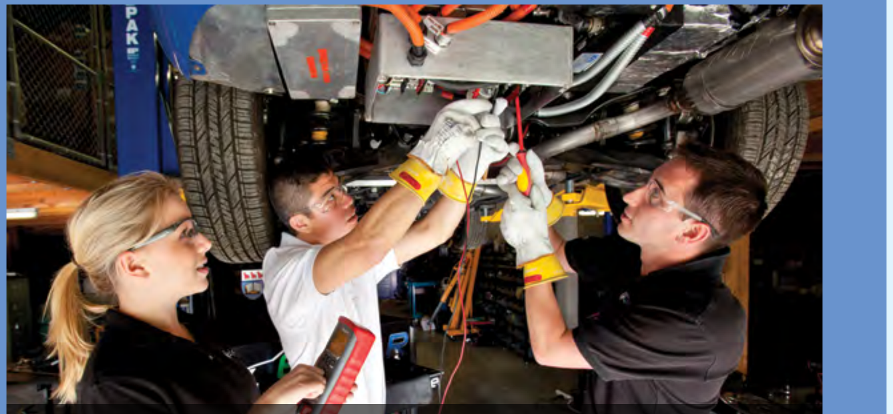
Over two decades, IESVic has forged strong collaborative links with leading industrial partners and public sector decision-makers across Canada and around the world. Research partners include utilities, car manufacturers, transportation planners, renewable energy device developers, First Nations communities, governments, and university researchers in more than 15 countries.

IESVic's multidisciplinary approach is unique, as energy research is often pursued from a single disciplinary perspective. At the institute, engineers, scientists and social scientists come together to examine the "big picture" in energy systems—from energy extraction through to service provision.

To cover the broad spectrum of energy systems, research at IESVic focuses on five research themes:

- Hydrogen and fuel cell systems
- Renewable energy systems
- Techno-economic modelling
- Transportation
- Carbon management

Largely due to IESVic's research successes, UVic is now ranked the fifth most influential university in the world in the field of energy and fuels. In North America, only Princeton, Cornell and the US National Renewable Energy Lab are rated higher.



Working with IESVic faculty mentors, students on the UVic EcoCar team designed, constructed and performance-tested a hybrid vehicle as part of the international EcoCAR–Next Challenge.

2010-11 at a glance

CLEAN ENERGY

New PICS research projects include a boost for clean energy. In May 2011, the UVic-hosted and led Pacific Institute for Climate Solutions (PICS) announced $1.8 million in new funding for 27 BC-led projects aimed at finding solutions to the environmental, social and economic challenges—and opportunities—brought about by climate change. Project durations range from eight months to 2.5 years and come under one of the PICS research themes: the low carbon emissions economy, sustainable communities, social mobilization, and resilient ecosystems. UVic-based projects include evaluation of wave energy converters and design and siting of wind turbines. *http://bit.ly/uvicar31*

Nanotechnology: from solar cells to cancer screening. Two leading researchers in nanotechnology research received this year's Craigdarroch Award Silver Medals for work fabricating and investigating the properties of nano-scale metallic structures. Chemist Alexandre Brolo and engineer Reuven Gordon are both working in this field, with a variety of likely applications including sensors for cancer diagnostics and the creation of more efficient solar cells. *http://bit.ly/uvicar32*

From biofuels to the biomechanics of disease. The research of biochemist Alisdair Boraston, which focuses on environmental polysaccharides (including plant cellulose and seaweed) as well as the role of carbohydrate-active proteins in infectious and genetic diseases, also spans the gamut from clean energy research to health. His work on polysaccharide bioconversion holds the potential to yield carbon-neutral biofuels, and his work in human health improves our understanding of basic biological processes that result in diseases such as a microbial infections and protein storage disorders.

INNOVATION AND ENTREPRENEURSHIP

A new name for excellence: the Peter B. Gustavson School of Business. In November 2010, UVic celebrated the renaming of the Faculty of Business to the Peter B. Gustavson School of Business. This is the first time in UVic's history that a faculty has been named after an individual. Gustavson has been involved with the Faculty of Business since 2003 as an employer, member of its advisory board, executive-in-residence and chair of the Distinguished Entrepreneur of the Year Award event that he helped establish. *http://bit.ly/uvicar34*

Innovative engineering degree program wins business award. UVic's engineering entrepreneurship master's program is one of the "20 Most Innovative Companies" in BC. That's according to *BC Business Magazine*, which describes the program as "impressively inventive" and growing "ideas that have a business plan encoded in their DNA." Through a unique partnership with Wesley Clover International, an Ottawa-based investment company, UVic engineering students are being given the opportunity to graduate with a master's degree, a diploma in entrepreneurship delivered by the Gustavson School of Business, and equity in a business they helped form. *http://bit.ly/uvicar35*

UVic Industry Partnerships put knowledge to work. UVic's industry liaison office, formerly known as Innovation and Development Corporation (IDC), is now UVic Industry Partnerships, or UVic IP. "Our new name reflects the value and emphasis we place on working with the private sector to develop UVic technologies in a way that adds value for our researchers, our partners and the economy," explains Brent Sternig, president and CEO of the unit. *http://bit.ly/uvicar36*

UVic in world news

There was something ironic about the deluge of media attention that followed the February 2011 release of a new study linking an increase in the intensity of extreme precipitation events to human-induced global warming.

At the centre of the flood was UVic climatologist Dr. Francis Zwiers, one of the paper's co-authors, who suddenly became one of the most sought-after climate experts on the planet.

"We were completely overwhelmed by the storm of media interest that was generated by this paper," says Zwiers, who heads UVic's Pacific Climate Impacts Consortium. "It was fun, but exhausting."

The study was featured on the cover of *Nature*, one of the world's premier science journals. It offers the strongest evidence to date that human-induced global warming is responsible for the observed increase in the intensity of heavy rain and snow events in the northern hemisphere over the past several decades.

Coverage of the story crossed the globe, including front page coverage in the *New York Times*, *USA Today*, *Le Monde* and the *Sydney Morning Herald*. Concerns about climate change and flooding drove news services on every continent (except Antarctica) to report on the study's findings.

TRANSFORMATIVE

NEPTUNE Canada instrument installation off the west coast of Vancouver Island.

The Ocean Networks Canada (ONC) Observatory is bringing an ocean full of safety, economic and environmental benefits to Canada and the world.

When tsunami waves radiated outward across the Pacific after the March 11, 2011 earthquake off the coast of Japan, sensors on the ocean floor off British Columbia helped coastal residents and emergency planners know what to expect when the waves hit Canada.

Those sensors—part of the University of Victoria's Ocean Networks Canada (ONC) Observatory—picked up the size, speed, and direction of the waves, assuring us that the waves had shrunk to a fraction of their initial force.

Information at our fingertips

The world-leading ONC Observatory is studying much more than tsunamis. Through continuous, real-time observations from clusters of instruments at key seafloor sites in the northeast Pacific Ocean, the observatory is changing the way we study the oceans. It's providing scientific evidence for policy-makers on a wide range of critical issues, and developing new technologies that will create jobs and economic opportunities.

"Put simply, the observatory is transforming global ocean science as we know it," says Dr. Martin Taylor, president and CEO of Ocean Networks Canada, which manages the observatory for UVic.

Comprised of the NEPTUNE Canada and VENUS cabled underwater networks, the ONC Observatory stretches hundreds of kilometres offshore, connecting the ocean bottom to desktops everywhere.

Scientists across Canada and abroad are remotely conducting coastal and deep-sea experiments and analyzing data—without getting their feet wet. They can respond instantly to events such as earthquakes, tsunamis, fish migrations, plankton blooms, storms and volcanic activity.

World-class leadership

Beginning in September 2011, Dr. Kate Moran, a world-renowned ocean engineer who was previously assistant director in the White House Office of Science and Technology Policy in Washington, DC, will take the helm of NEPTUNE Canada, with the retirement of founding director Dr. Chris Barnes.

In her White House role, Moran advised the Obama administration on the oceans, the Arctic and global warming. She is especially well qualified to lead NEPTUNE Canada, the world's largest cabled ocean network. NEPTUNE Canada has five study sites on an 800-km loop of cable stretching across the Juan de Fuca tectonic plate, as deep as 2,600 metres down.

A seismic shift in study

The VENUS coastal network has four study sites: one in Saanich Inlet and three in the Strait of Georgia. Scientists use these sites to learn about ocean change, fish health and abundance, animal behaviour, low-oxygen zones, Fraser Delta slope failures, and the changing soundscape of the strait as the region's shipping traffic gets busier.

When fully instrumented, VENUS and NEPTUNE Canada will amass more than 60 terabytes of scientific data every year—or the equivalent of almost six million phonebooks.

This ever-expanding digital library is a lasting resource for scientists, policy-makers, educators and students everywhere.

"This continuous flood of data allows for advanced system-based science in ways not previously possible, and supports a quantum leap in understanding complex ocean processes and their consequences," explains Taylor.

Coastal health and safety

Concerns about the health of coastal environments are escalating in BC and around the world. Rising sea levels, changes in fish abundance, and the possibility of a mega-earthquake all threaten the safety and livelihoods of BC residents. Long-term ocean monitoring by the observatory helps keep the people, economy and environment of BC healthy.

For example, instruments on the VENUS coastal network are observing seafloor changes near the mouth of the Fraser River. Changes to slope stability in this underwater delta are of significance to the nearby coal port, container terminal and Tsawwassen ferry terminal.

Charting the ocean's wealth

As the marine environment changes, so will marine life. Warmer waters make it easier for some local animals and harder for others. Invasive species may move in. As the seas become more acidic due to increasing carbon dioxide, species that build calcite shells, such as scallops and oysters, will have increasing trouble maintaining their shells. Research on the ONC Observatory is tracking these critical changes and looking at how they might affect the marine food chains upon which we depend. Marine monitoring helps track ocean productivity, including the growth of plankton blooms. These are key to productive fisheries and to minimizing the health and commercial impacts of harmful red tides.

Both networks use underwater listening devices to assist in monitoring the activities of killer whales and other marine mammals—cornerstone species in BC's growing ecotourism industry.

VENUS is also mobile—in 2011, the network is putting sensors on ferries sailing the main Vancouver routes to learn about the water masses coursing through the Strait of Georgia and the nutrients they carry. New coastal HF radar will steadily monitor sea state conditions including waves and currents, which will help all boaters make safe decisions about navigating these waters.

A growth industry

The observatory's cutting-edge technologies make Canada, and specifically BC, a leader in ocean science and technology. Other countries are looking to Canada for assistance as they build their own marine observation systems. For instance, a partnership with OceanWorks International in North Vancouver, a major supplier of observatory components, led to new product lines and new markets for the company. OceanWorks recently secured a major international contract in the Mediterranean for subsea technologies proven on the ONC Observatory.

Visit *www.oceannetworks.ca* for more information.

2010-11 at a glance

OCEANS AND CLIMATE

A volcano tests a climate theory. A Canada-US team led by UVic oceanographer Dr. Roberta Hamme examined the "seeding" of the ocean with iron-laden ash after the 2008 eruption of Alaska's Kasatochi volcano. Although the volcanic ash fueled a massive phytoplankton bloom, it resulted in only a modest uptake of atmospheric CO_2, says Hamme, dampening hopes that intentionally seeding the ocean with iron-rich substances could substantially slow CO_2 accumulations associated with global climate change. *http://bit.ly/uvicar51.*

Oceanic telepresence. Colaborating with colleagues across North America and in Indonesia, UVic grad students and researchers took part in the launch of a new generation of scientific expeditions, without leaving their desks. Video of the deep-ocean discoveries of the Indonesian seafloor were sent across the world in real time via the internet, allowing scientists across the globe to collaborate and share insight during the exploration mission. *http://bit.ly/uvicar52*

Green research ship. UVic is refitting a former Coast Guard vessel to become the world's first plug-in hybrid "green ship" powered by electricity, hydrogen fuel cells and low-emission diesel fuel. The hybrid system will be quieter, more efficient and cleaner than traditional marine systems, and the vessel will be used for coastal ocean research and to service the ONC Observatory. *http://bit.ly/uvicar53*

GLOBAL CHANGE AND SUSTAINABILITY

Environmental Law. UVic law students will soon be able to participate in a new Environmental Law and Sustainability initiative, thanks to a $2.75-million grant from the Quadra Island-based Tula Foundation. *http://bit.ly/uvicar54*

Building on community strengths. Sustainability is not just about environmental concerns. "You can't separate our need to live in harmony with the environment from our need to create long-term well-being from the social and economic aspects of our lives together,"says UVic business professor Ana María Peredo. She's director of UVic's Centre for Co-operative and Community-Based Economy, which looks for ways that communities can build on existing strengths to create economic initiatives that benefit everyone. In one project, the centre is using the co-operative model to help citizens in Nelson, BC build continuity into their downtown business core. "The key is to shift values from narrow-self-interest toward community cooperation," she says. "That's how you get sustainable communities."

A "dream come true" for renowned ethnobotanist. Nancy Turner has devoted her academic career to researching the pivotal role plant resources play in Aboriginal cultures and languages. She's won accolades for her work around the world, but a new grant from the Tula Foundation gives Turner the opportunity to study and conduct research in traditional West Coast Aboriginal territories to strengthen her knowledge even further. Turner has been named the inaugural Hakai Chair in Ethnoecology and will shift her focus from teaching to research, allowing her to work extensively with Central Coast Aboriginal communities and graduate students until her retirement. *http://bit.ly/uvicar55*

LE,NONET in the national news

Columnist Gary Mason of *The Globe and Mail* praised the LE,NONET program under the headline "UVic shows there's a better Aboriginal way." The article addressed many of the ways UVic supports Indigenous success. *http://bit.ly/extr6*

Maclean's magazine devoted a full page in its annual university rankings issue to the LE,NONET project as well. Columnist Paul Wells wrote that "the best results I've seen in promoting access and achievement for Aboriginal students are from the University of Victoria." *http://bit.ly/extr8*

TED Talks taps UVic grad student

PhD student Genevieve von Petzinger (anthropology) is responsible for cracking a startling code on prehistoric cave walls, and in July 2011, she joined the world's leading thinkers and speakers to share these hints from our ancient past. She was the only Canadian on the distinguished roster of 20 new international fellows at the TEDGlobal conference in Scotland, July 11 to 15. UVic-produced video: *http://bit.ly/caveart*

SUCCESS STORIES

On a trip to the Tsawout reserve, LE,NONET students help build a smoke house and learn how to smoke fish.

The LE,NONET research project has dramatically improved the culture and climate for Indigenous student access and success at UVic.

Any student entering university can feel a bit out of place. To some extent, this is normal. At its best, post-secondary education is designed to be full of new challenges, offering a wealth of opportunities to explore, test and develop new ideas. What's more, even a mid-sized college or university campus can be a confusing but exciting, cosmopolitan place. For many students, university is also their first taste of life as an adult, away from the communities where they grew up, and a step away from the expectations and supports of their families and friends.

But for Indigenous students, those challenges have historically been difficult to navigate, with conflicting claims on identity and at a distance from their home communities. At UVic, a range of programs exist to help students from all backgrounds adapt to campus life. And since its inception in 2005, one cornerstone of support for Indigenous students has been the LE,NONET project—named for a Straits Salish term that means "success after enduring many hardships."

The first program of its kind in Canada, the LE,NONET research project (pronounced le-non-git) has been important in improving Indigenous student success at UVic, and in demonstrating the supports that can be put in place to help Indigenous students at colleges and universities across Canada.

Supporting Indigenous values and community

More importantly, student participants in the project reacted positively to LE,NONET's work to acknowledge and reinforce Indigenous identity, foster Indigenous community on campus, and value Indigenous practices and ways of knowing. Based around a suite of student-focused programs including peer mentoring, bursaries and emergency relief funds, preparation seminars, community internships and research apprenticeships developed with the support of the Canadian government and with input from Indigenous groups, LE,NONET dramatically improved student outcomes. (There was also an additional program for UVic faculty and staff to support student participants.)

The pilot phase of the program, from 2005 to 2009, proved to be an unqualified success, giving researchers, participants and partners an opportunity to investigate program models for supporting the success of Indigenous students in their university studies by providing a culturally grounded, supportive environment.

Between 2005 and 2009, LE,NONET students experienced:

- 100 per cent increase in term-to-term continuation
- 20 per cent increase in graduation rates
- 67 per cent reduction in withdrawal rates.

LE,NONET participants also remained in their academic programs for an additional year when compared to Indigenous students who didn't participate in the program.

Continuing the program

Although the pilot phase of LE,NONET wrapped up in 2009, a number of programs developed as part of the widely praised project will continue at UVic.

Thanks to $250,000 in one-time funding from the Government of British Columbia announced in March 2011, LE,NONET will continue to enhance the experience and opportunities of Indigenous students by:

- Increasing the amount of funding for bursaries so that interested students can apply for bursaries for both the summer and winter terms.
- Expanding the elder-in-residence program.
- Doubling the number of research apprenticeships and community internships so that LE,NONET students can experience both programs.
- Expanding the peer mentorship program beyond current UVic Indigenous students to include Indigenous Grade 11 and 12 students in local high schools–easing their transition into university.
- Continuing the research component of the LE,NONET project by tracking the participation of First Nations, Métis and Inuit students and the success of the current LE,NONET students.

A success for students, and for educators

The pilot phase of the LE,NONET project demonstrated that substantial gains could be made in the context of a mainstream university, through a combination of supports and respectful, reciprocal partnerships with Indigenous communities. The benefit is clear: through both LE,NONET and the university's wider commitment to attract, include and retain Indigenous students, enrolment has gone from fewer than 100 students in 1999 to about 700 today – nearly 150 of whom are graduate students.

That's a success story worth telling, and passing along.

> *"Success to me means that I can complete my program and while doing that acknowledge my Aboriginal background and be supported by that. And really be able to explore it, and not compromise that background for any achievements in academia."*
>
> — LE,NONET student

2010-11 at a glance

INDIGENOUS AND CULTURAL STUDIES

- **Trudeau scholarship for study of Indigenous law.** Johnny Mack, a PhD candidate in UVic's Graduate Program in Law and Society, was awarded a Trudeau Foundation scholarship to support his work studying the legal frameworks of the Nuu-chah-nulth people of Vancouver Island. *http://bit.ly/uvicar61*
- **Linking law and Indigenous rights.** In October 2010, UVic Law and the Cowichan Tribes brought together representatives from several First Nations, in a framework set by Cowichan norms, for a conference on Indigenous Law. Later that month, the Project North Run for Justice presented a ceremonial talking stick to the Faculty of Law in appreciation of the support the faculty has given to First Nations communities over the years.
- **Mini-U summer camps introduce Indigenous students to campus.** BC students of Indigenous ancestry from grades eight to 12 attended UVic's eighth annual Indigenous Student Mini-University Summer Camp in 2011. The camp included campus tours, talking circles, writing exercises, whale watching and cultural performances.
- **Digitizing the records of an immigrant community.** A gift from the Chinese Consolidated Benevolent Association will help UVic Libraries share the association's story with the community at large through the digitization and translation of its significant at-risk historical documents. *http://bit.ly/uvicar64*
- **Holocaust memorial field school.** Students in the I-witness Holocaust Field School, launched by the Department of Germanic and Slavic Studies, travelled to Central Europe to explore how the sights, memories and history of the Holocaust have been preserved at historical sites, museums and monuments—and also witnessed how the lessons of that time are relevant today. *http://bit.ly/uvicar65*

FINE AND PERFORMING ARTS

- **Visiting scholars enrich campus.** Three internationally recognized artists supplemented the electric environment in Fine Arts this year: multi-disciplinary artist Rebecca Belmore (work pictured), Ojibway journalist and storyteller Richard Wagamese, and screenwriter and playwright Daniel MacIvor. *http://bit.ly/uvicar66*

- **Writing student wins PRISM prize.** Third-year writing student Erin Fisher was selected as the Grand Prize Fiction winner in the 2011 *PRISM International* poetry and fiction contest for her 2,500-word short story "Bridges." The first and second place awards in the previous year's contest were also won by UVic writers. *http://bit.ly/uvicar67*
- **Legacy Gallery expanded.** Reopened in August after renovations, the Legacy Art Gallery in downtown Victoria now has larger and more flexible spaces for exhibitions drawn from the university's extensive art collections. The Legacy Gallery complements the Maltwood Prints and Drawings Gallery at the MacPherson Library, and extensive installations of art across campus, in making art accessible to community members, students and scholars. *http://uvac.uvic.ca.*

Facts and figures

People

- STUDENT ENROLMENT (2010/11): 19,905 (including 3,042 graduate students).
- FACULTY AND STAFF (January 2011): 5,048 employees, including 873 faculty (42% female, 58% male), 861 sessional instructors, 1,020 specialist/instructional staff, 2,294 administrative, professional and support staff.
- ALUMNI (September 2011): 106,134 alumni by degree, certificate or diploma. Among 73,284 alumni with known addresses, 79% live in British Columbia and 4,416 live in 116 other countries. More than 30,000 live in Greater Victoria.

Honours and awards

- 45 CURRENT OR FORMER UVIC faculty members have been elected fellows of the Royal Society of Canada, the nation's highest academic honour for career achievement.
- UVIC FACULTY MEMBERS hold 36 coveted Canada Research Chairs. UVic instructors are also well-represented among the winners of acclaimed national 3M teaching awards.

ACHIEVEMENT

Foaming chemistry is just part of the fun in Science Venture.

> *"This experience has taught me that I might want to become a teacher, which is something that I wasn't sure of before."*
>
> — Britney Allen

Thirty-five years after launching one of Canada's largest co-operative education programs, UVic's Co-operative Education Program and Career Services reached new heights, celebrating 60,000 co-op work term placements in February 2011.

In the spring of 2011, 35 years after the launch of UVic's co-operative education program, biochemistry student Britney Allen secured the program's 60,000th co-op work term when she was hired by Science Venture to work as a science and technology camp instructor. She provided hands-on science, engineering and technology learning opportunities for students entering grades one to 12.

"It says 'big kid' on the back of my shirt, and that's pretty much what my job is," says Allen. "I get to share my enthusiasm for science with students. This experience has taught me that I might want to become a teacher, which is something that I wasn't sure of before. I had no idea that classroom management and curriculum development could be so interesting, challenging and engaging."

UVic's award-winning Science Venture program conducts summer camps and classroom workshops across Vancouver Island and BC, inspiring youth to explore the possibilities of science, engineering and technology.

Putting learning into motion

Like many co-op students, Allen heard about the co-op program when she first applied to UVic, and decided co-op would be the ideal way to alternate her academic experiences with relevant real-life learning in the workplace. "I thought it would be interesting to try different job opportunities and add that to my UVic experience."

Allen is one of more than 20,000 students who have pursued a co-op degree at UVic since the university's co-operative education program was established in 1976. To date, co-op students have completed more than 15,000 years of work and have earned more than $600 million in salaries.

UVic's co-op program does more than provide students with work experience—it gives them the opportunity to work alongside professionals in their fields, explore possible career routes and put their learning in motion. The program also connects UVic to the community by forging partnerships with employer organizations. In fact, many employers use co-op as a recruitment tool and hire former co-op students as full-time employees.

"Co-op is such a multi-faceted tool," says Norah McRae, executive director of UVic Co-op and Career Services. "It's a learning strategy but it's also a way to generate lifelong connections—co-op students go on to become co-op employers because they understand how valuable the experience is to everyone involved."

A competency-based approach

Not only is UVic's co-op program one of the largest in Canada, it's also a trailblazer. UVic co-op is the only Canadian co-op program to use a competency based assessment model—during each work term, students and employers assess student learning in relation to 10 core competencies, as well as program-specific, professional and international competencies. All UVic co-op students began applying this model to their work terms in the summer of 2011 and competency assessment tools are now available to any UVic student or alumnus at *www.uvic.ca/coopandcareer/competencykit*.

Co-op facts

- One in four UVic students participates in co-op.
- Nearly 2,600 placements are completed each year in Victoria, across Canada and around the world.
- UVic's co-op program was established in 1976 in the Departments of Chemistry and Physics. The program secured 58 placements in its first year; today it includes 13 co-op offices that provide opportunities for students in 47 academic areas.

Career support beyond co-op

Co-op and Career Services supports students in all aspects of their career development. In addition to administering 13 co-op programs, staff members provide career support to all UVic students and alumni. Services include one-on-one career appointments, help with resumés and cover letters, career preparation workshops, and access to job postings of all kinds. Support details at *www.uvic.ca/coopandcareer* and postings at *https://learninginmotion.uvic.ca*.

Three kits, hundreds of resources

Students and alumni can find more than 115 career-related resources on the Co-op and Career website at *www.uvic.ca/coopandcareer*.

Created in the fall of 2010, the site highlights include a career strategy kit, competency kit, and a work search kit.

2010-11 at a glance

SOCIETY AND HEALTH

- **Funding boost for assistive technologies.** In June 2011, BC Premier Christy Clark visited campus to announce a $3.5-million grant for two innovative projects involving technology that will help seniors and people with disabilities remain as independent as possible. CanAssist, a UVic organization dedicated to improving the quality of life and promoting the independence of those with disabilities, is a partner in both projects. *http://bit.ly/uvicar71*
- **Biomedical engineer "outsmarts" HIV.** Groundbreaking research by Dr. Stephanie Willerth has significantly advanced HIV knowledge and treatment prospects. Willerth and her team studied approximately 15,000 different versions of the virus, allowing them to locate the specific genes of the virus that provide resistance to drugs—knowledge that could help researchers develop more effective treatments for HIV. *http://bit.ly/uvicar72*
- **Protein research aimed at the future of forests and human health.** In July, 2011 Dr. Christoph Borchers, one of the world's top proteomics researchers, was appointed the Don and Eleanor Rix BC Leadership Chair in Biomedical and Environmental Proteomics for groundbreaking biochemical protein research that is opening the doorway for a new generation of advances in medical testing and forestry management. *http://bit.ly/uvicar76*
- **Aging population not responsible for medical cost increases.** Grim predictions that our rapidly aging society will act like a "grey tsunami" to overwhelm and bankrupt our health care system aren't accurate, according to a study led by gerontologist Neena Chappell. *http://bit.ly/uvicar74*

- **CORE support to educational needs.** The Faculty of Education launched the Centre for Outreach Education (CORE), a multidisciplinary centre dedicated to enhancing the education of children and youth from our local communities, many of whose needs are not being met through schools and current government programs. *http://bit.ly/uvicar75*

- **English Language Centre 40th anniversary.** UVic's ELC—which is part of the Division of Continuing Studies—is one of the oldest English language schools in Canada. It first offered English programs to French-Canadian bursary students in 1970, soon followed by specialized programs for Japanese university groups. Forty years later, the ELC still receives over 100 French Canadian and 500 Japanese students a year, along with students from 30 other countries around the world. *http://bit.ly/uvicar77*

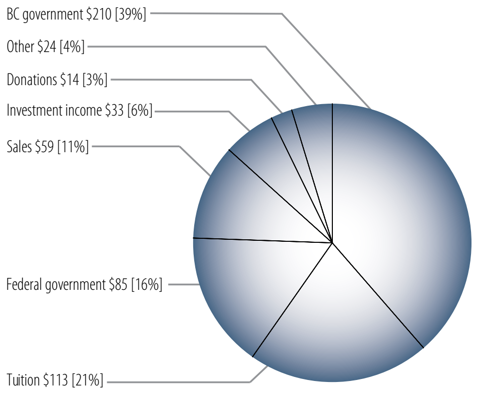
Honours and awards

UVic is, above all, a diverse community of extraordinarily gifted people, dedicated to the pursuit of knowledge and its application in the service of society. Here are just some of the awards and honours bestowed in the past year upon our students, faculty and graduates in recognition of their outstanding achievements.

- **Chris Barnes** (NEPTUNE Canada) Brady Medal, Micropalеontological Society
- **Shailoo Bedi and Carlie Graham** (libraries) National Inclusive Education Award from the Canadian Association for Community Living and the British Columbia Association for Community Living
- **Ashoka K.S. Bhat** (engineering) 2010 Wighton Fellowship, Sandford Fleming Foundation
- **Brian Bird** (law student) clerkship at the Supreme Court of Canada
- **Dániel Péter Biró** (music) Giga-Hertz-Award for electronic music
- **Dante Canil** (earth and ocean sciences) Fellow of the Royal Society of Canada
- **Curran Crawford** and **Zuomin Dong** (engineering) EcoCAR Outstanding Long Term Advisor Award, US National Science Foundation
- **Lorna Crozier** (writing) Officer of the Order of Canada and the Cheryl and Henry Kloppenburg Award for Literary Excellence, Saskatchewan Writers' Guild
- **EcoCar student team** seven major awards at the EcoCar—Next Competition, US National Science Foundation
- **Erin Fisher** (writing student) 2011 *PRISM International* short story award
- **Martin Byung-Guk Jun** (engineering student) 2011 Outstanding Young Manufacturing Engineer Award, Society of Manufacturing Engineers
- **Karolina Karas** (writing student) *Globe and Mail* Student Newspaper Challenge winner
- **Mary Kerr** (theatre) Fellow of the Royal Society of Canada
- **Francis Lau** (health information science) 2010 Leadership Award, Canada's Health Informatics Association
- **Jack Littlepage** (Centre for Global Studies) 2010 Lewis Perinbam Award, World University Service of Canada
- **Johnny Mack** (law student) Pierre Elliott Trudeau Foundation Scholarship
- **Lenora Marcellus** (nursing) and members of Vancouver Island's Safe Babies Program, 2010 Rotman Award for Pediatric Home Care Innovation, SickKids Foundation
- **Catherine "Katy" Mateer** (psychology) inaugural Catherine Mateer Scientist-Practitioner Award, BC Psychological Association
- **Julio Navarro** (physics and astronomy) Fellow of the Royal Society of Canada
- **John Oleson** (Greek and Roman Studies) 2010 Pierre Chauveau Medal, Royal Society of Canada
- **Monica Prendergast** (curriculum and instruction, theatre) and **Juliana Saxton** (theatre, emerita), American Alliance for Theatre and Education Distinguished Book of the Year award
- **Ryan Rhodes** (education) 2011 Canadian Cancer Society Senior Scientist Award
- **Rachael Scarth** (AVP Research) 2011 Manitoba Canola Choice Award
- **Kelli Stajuhar** (nursing) and **Laura Funk** (post-doctoral student), Anselm Strauss Award, US National Council on Family Relations
- **Marnie Swanson** (libraries) Helen Gordon Stewart Award, BC Library Association and 2011 Canadian Association of Research Libraries Award
- **James Tully** (political science) C.B. Macpherson Prize, Canadian Political Science Association
- **Marilyn Uy** (business) 2011 IDEA Awards Thought Leader Award
- **Katherine Walkiewicz** (writing student) juried into short films section of the Cannes International Film Festival
- **Andrew Weaver** (earth and ocean sciences) 2011 Miroslaw Romanowski Medal, Royal Society of Canada
- **Francis Zwiers** (mathematics) 2011 Statistical Society of Canada Award for Impact of Applied and Collaborative Work
- **Professional Specialization Certificate in Teaching English as a Foreign Language** (continuing studies) Canadian Association for University Continuing Education program award
- **Continuing Studies marketing unit,** Canadian Association for University Continuing Education e-marketing award
- **Freshman's Wharf team** (writing) Motion Picture Arts and Sciences Foundation of BC Leo Award

Revenues by source 2010/11

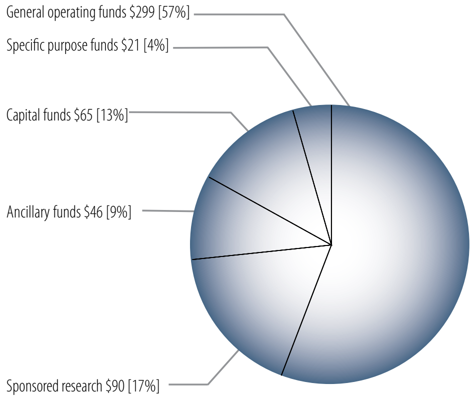
[Fund accounting basis. In millions.]



Total revenues $538 million

Expenditures by fund 2010/11

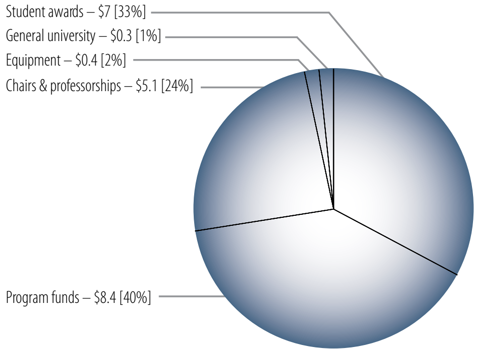
[Fund accounting basis. In millions.]



Total expenditures $521 million

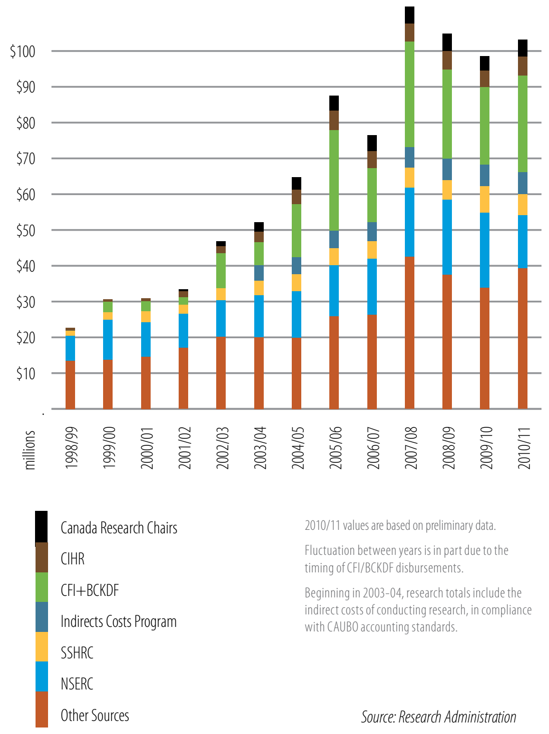
Allocation of funds raised 2010/11

[Accounting in millions.]



Total fundraising $21.2 million

External research grants and contracts



2010/11 values are based on preliminary data.

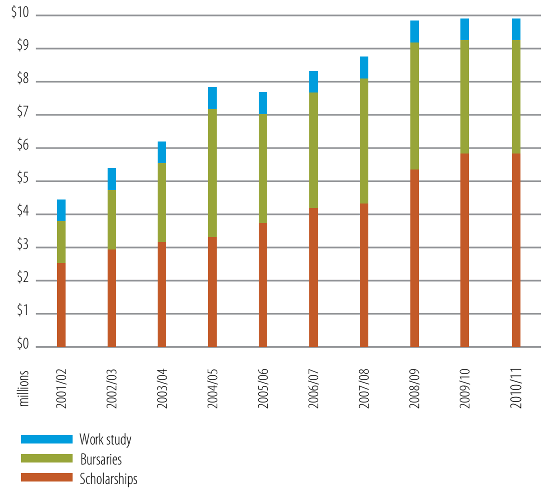
Fluctuation between years is in part due to the timing of CFI/BCKDF disbursements.

Beginning in 2003-04, research totals include the indirect costs of conducting research, in compliance with CAUBO accounting standards.

Source: Research Administration

Student financial aid

[Primarily undergraduate.]



SUSTAINABLE OPERATIONS

- **One of Canada's greenest employers.** For the second year in a row, UVic was named as one of Canada's 100 Greenest Employers. *http://bit.ly/greenuvic*
- **Two more campus buildings meet gold standard.** The UVic Administrative Services Building and First Peoples House were both certified as achieving LEED gold status in environmental design and sustainability. Five buildings on campus have now met this standard.

Governance

Chancellor

Murray Farmer

Executive

David H. Turpin
President & Vice-Chancellor

Reeta Tremblay
Vice-President Academic & Provost

J. Howard Brunt
Vice-President Research

Valerie Kuehne
Vice-President External Relations

Julia Eastman
University Secretary

Gayle Gorrill
Vice-President Finance & Operations

Board of Governors

Nav Bassi (elected by staff)
Jenn Bowie (elected by students)
Peter Driessen (elected by faculty)
Murray Farmer
Tony Gage
Michael Kennedy
Lindsay LeBlanc
Jane Butler McGregor
Susan Mehinagic, Chair
Erich Mohr
Tara Paterson (elected by students)
Ray Protti
David H. Turpin
Beverly Van Ruyven
Barbara Whittington (elected by faculty)

Honorary degrees conferred

November 2010

- **Jean Watson**, pioneering nursing theorist and educator
- **Sheila Watt-Cloutier**, human rights advocate for the Inuit
- **Hon. Lorna Marsden**, sociologist, educator and former Canadian Senator
- **Norman Riddell**, former head of the Canada Millennium Scholarship Foundation
- **Hon. Kevin Lynch**, retired clerk of the Privy Council of Canada

June 2011

- **Mary-Lou Florian**, First Nations artifact conservationist
- **John Furlong**, lead organizer of the 2010 Vancouver Olympic and Paralympic Games
- **Rolf-Dieter Heuer**, scientist at the helm of the CERN subatomic physics lab in Switzerland
- **Naxaxalhts'i (Albert "Sonny" McHalsie)**, leading interpreter of Coast Salish culture

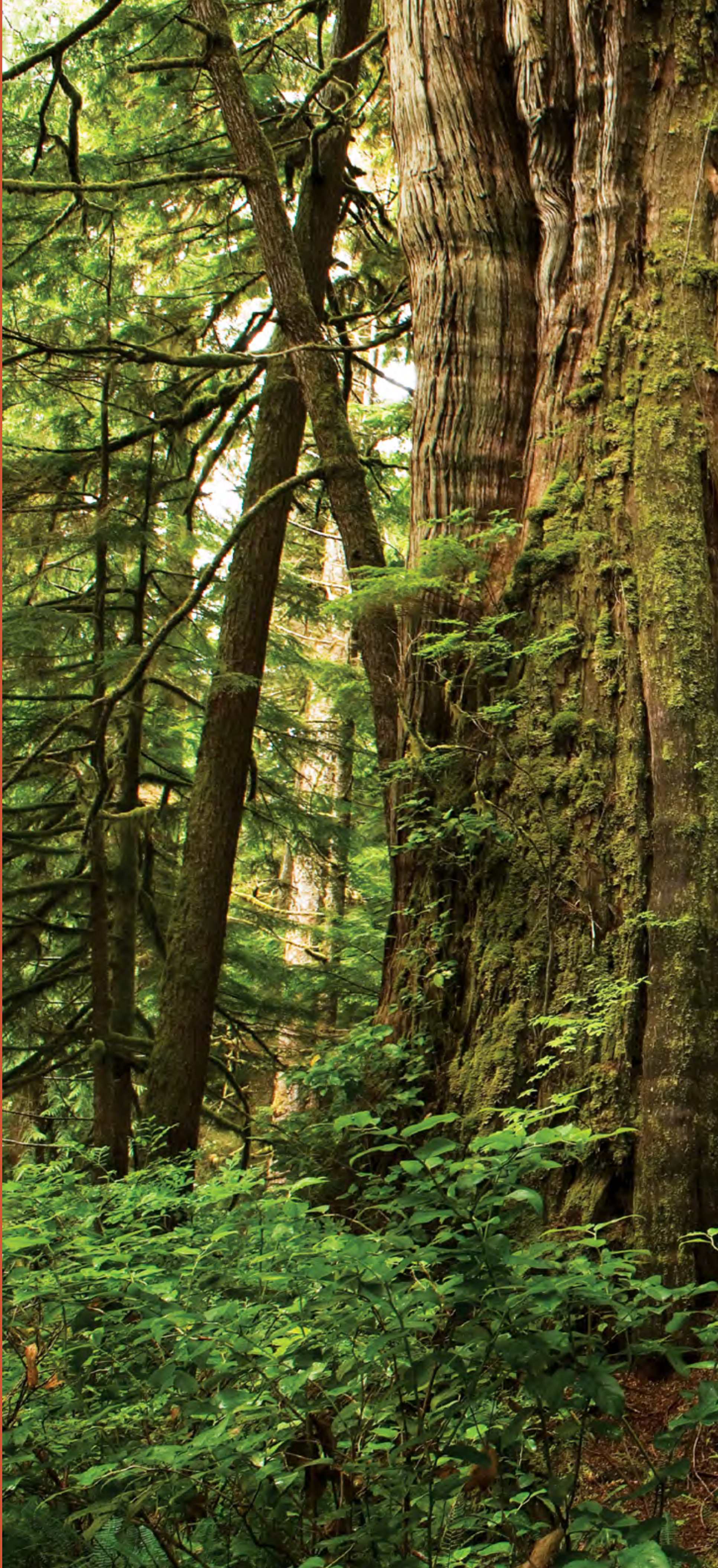
EcoAudit

Highlights, the University of Victoria Annual Review, has been printed using vegetable-based inks on Forest Stewardship Council-certified paper with 100 per cent post-consumer recycled fibre, manufactured with wind power—providing the following benefits to our natural environment, when compared with the use of virgin paper:

Greenhouse gases prevented	Wastewater saved	Solid waste not generated	Waterborne waste prevented	Energy saved	Additional natural gas saved
870 lbs	2,649 gallons	293 lbs	18 lbs	4.4 million BTUs	2,439 cubic feet

Above information is based on: 650 lbs. of Mohawk Options

Cover image: The Cheewat Giant, a western red cedar located in Pacific Rim National Park on the west coast of Vancouver Island. Photo by Byron Fry.



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